

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A network comprising:

a plurality of interconnected switches, wherein said switches are programmable to selectively forward instances of network traffic; and

a plurality of devices coupled to said plurality of interconnected switches, wherein a network interface of a device is physically wired to a switch ~~each network interface on a device is coupled to a switch;~~

wherein said devices are organized in multiple tiers, wherein a communication path from a first tier device to a second tier device is actualized by enabling intervening switches to forward an instance of network traffic from said first tier device to said second tier device, wherein an instance of network traffic sent from said first tier device and intended for said second tier device is forwarded by said intervening switches only to said second tier device; and wherein said device is removed as a member of said first tier and made a member of said second tier by selectively disabling actualized communication paths to said device and enabling new communication paths to said device with said device remaining physically wired to said switch ~~wherein network traffic is not forwarded between devices not communicatively coupled by an actualized communication path.~~

2. (Currently Amended) The network of Claim 1 wherein said a switch comprises multiple switch ports, wherein said a device is physically wired ~~coupled~~ to a single switch port and wherein said a switch is couplable to multiple devices.

3. (Currently Amended) The network of Claim 1 wherein said a device comprises multiple network interfaces, wherein each network interface is coupled to ports on said a same switch.

4. (Currently Amended) The network of Claim 1 wherein said a device comprises multiple network interfaces, wherein each network interface is coupled to ports on more than one switch.

5. (Original) The network of Claim 1 wherein communication between intervening switches is implemented using a data-link layer protocol corresponding to Layer 2 of the OSI (Open Systems Interconnection) model.

6. (Currently Amended) The network of Claim 1 wherein communication paths between said devices are created substantially in compliance with IEEE 802.1Q.

7-8. (Canceled).

9. (Currently Amended) The network of Claim 1 wherein said devices are organized in a plurality of local area networks (LANs), wherein said first tier comprises a first LAN and said second tier comprises a second LAN. ~~communication between devices on a LAN is actualized by enabling communication between intervening switches, wherein an instance of network traffic sent over a first LAN is forwarded by said intervening switches only to said devices coupled to said first LAN.~~

10. (Canceled).

11. (Currently Amended) The network of Claim 1 wherein communication paths between said devices are dynamically changeable.

12. (Currently Amended) The network of Claim 1 wherein said device is comprising a multi-functional device, wherein a first communication path to said multi-functional device is actualized for a first function and a second communication path to said multi-functional device is actualized for a second function.

13. (Currently Amended) A method for configuring a network comprising a plurality of devices coupled to a plurality of interconnected switches, said method comprising:

[[a)] identifying a communication path between a first tier of said network device and a second tier of said network device, said communication path comprising intervening switches coupled between said first and second tiers devices, wherein ~~each network interface on a device is physically wired is coupled~~ to a switch as a member of said first tier; and

[[b)] actualizing said communication path by enabling said intervening switches to forward network traffic from said first tier device to said second tier device, wherein an instance of network traffic sent from said first tier device and intended for said second tier device is forwarded by said intervening switches only to said second tier device;

disabling selected actualized communication paths to said device to remove said device as said member of said first tier; and

enabling a new communication path to said device to make said device a member of said second tier with said device remaining physically wired to the same said switch.

~~wherein network traffic is not forwarded between devices not communicatively coupled by an actualized communication path.~~

14. (Currently Amended) The method as recited in Claim 13 wherein said a switch comprises multiple switch ports, wherein said a device is coupled to a single switch port and wherein said a switch is couplable to multiple devices.

15. (Currently Amended) The method as recited in Claim 13 wherein said a device comprises multiple network interfaces, wherein each network interface is coupled to ports on said a same switch.

16. (Currently Amended) The method as recited in Claim 13 wherein said a device comprises multiple network interfaces, wherein each network interface is coupled to ports on more than one switch.

17. (Original) The method as recited in Claim 13 wherein communication between intervening switches is implemented using a data-link layer protocol corresponding to Layer 2 of the OSI (Open Systems Interconnection) model.

18. (Currently Amended) The method as recited in Claim 13 wherein communication paths between said devices are created substantially in compliance with IEEE 802.1Q.

19-20. (Canceled).

21. (Currently Amended) The method as recited in Claim 13 wherein said devices are organized in a plurality of local area networks (LANs), wherein said first tier comprises a first LAN and said second tier comprises a second LAN. communication between devices on a first LAN is actualized by enabling communication between intervening switches,

~~wherein an instance of network traffic over said first LAN is forwarded by said intervening switches only to devices coupled to said first LAN.~~

22. (Canceled).

23. (Currently Amended) The method as recited in Claim 13 wherein communication paths between said devices are dynamically changeable.

24. (Currently Amended) The method as recited in Claim 13 further comprising ~~[[:]]~~ enabling and disabling selected communication paths to a multi-functional device according to a function being performed by said multi-functional device.

25. (Currently Amended) A method for managing a network comprising a plurality of devices coupled to a plurality of interconnected switches, said method comprising:

~~[[a)]]~~ configuring said network in a first configuration comprising a first set of actualized communication paths between a first tier of said network and a second tier of said network devices, wherein said first tier includes a device having a network interface that is physically wired to a switch, wherein instances of network traffic are selectively forwarded through said network by programming said switches, wherein a communication path between said first and second tiers ~~devices~~ is actualized by enabling intervening switches to forward network traffic between said first and second tiers ~~devices~~, wherein an instance of network traffic intended for a particular tier ~~device~~ is forwarded only to said particular tier ~~device~~ and wherein network traffic is not forwarded between

tiers ~~devices~~ not communicatively coupled by an actualized communication path; and

[[b)]] changing said network to a second configuration comprising a second set of actualized communication paths different from said first set, wherein said ~~step of~~ changing comprises selectively disabling actualized communication paths and enabling new communication paths, wherein said device is removed as a member of said first tier and made a member of said second tier without rewiring the physical wiring between said network interface and said switch.

26. (Currently Amended) The method as recited in Claim 25 comprising ~~[[:]]~~ monitoring network performance against a threshold, wherein said changing step b) is implemented when said threshold level is crossed.

27. (Currently Amended) The method as recited in Claim 25 comprising ~~[[:]]~~ monitoring application performance against a threshold, wherein said changing step b) is implemented when said threshold is crossed.

28. (Currently Amended) The method as recited in Claim 25 wherein a switch comprises multiple switch ports, wherein said a device is coupled to a single switch port and wherein said a switch is couplable to multiple devices.

29. (Currently Amended) The method as recited in Claim 25 wherein said a device comprises multiple network interfaces, wherein each network interface is coupled to ports on a same switch.

30. (Currently Amended) The method as recited in Claim 25 wherein said a device comprises multiple network interfaces, wherein each network interface is coupled to ports on more than one switch.

31. (Original) The method as recited in Claim 25 wherein communication between intervening switches is implemented using a data-link layer protocol corresponding to Layer 2 of the OSI (Open Systems Interconnection) model.

32. (Original) The method as recited in Claim 25 wherein communication paths between devices are created substantially in compliance with IEEE 802.1Q.

33-34. (Canceled).

35. (Currently Amended) The method as recited in Claim 25 wherein said devices are organized in a plurality of local area networks (LANs), wherein said first tier comprises a first LAN and said second tier comprises a second LAN. ~~communication between devices on a first LAN is actualized by enabling communication between intervening switches, wherein an instance of network traffic over said first LAN is routed by said intervening switches only to devices coupled to said first LAN.~~

36. (Canceled).

37. (Currently Amended) The method as recited in Claim 25 wherein said changing further step b) comprises [[:]] enabling and disabling selected communication paths to a multi-functional device according to a function being performed by said multi-functional device.